

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
26 May 2005 (26.05.2005)

PCT

(10) International Publication Number
WO 2005/047340 A1

(51) International Patent Classification⁷: **C08B 30/12**,
30/16, 31/00, 30/18, B01J 8/10, 8/24

(21) International Application Number:
PCT/EP2004/012856

(22) International Filing Date:
12 November 2004 (12.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03257164.8 13 November 2003 (13.11.2003) EP

(71) Applicant (for all designated States except US): **CER-ESTAR HOLDING B.V.** [NL/NL]; Nijverheidsstraat 1, P.O. Box 9, NL-4551 LA Sas van Gent (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BERCKMANS**, Marc, Charles, Florent [BE/BE]; Rue des Mimosas 85, B-1030 Bruxelles (BE). **SIVASLIGIL**, Dogan, Sahin [NL/NL]; Schenkkade 297, NL-2595 AZ Den Haag (NL).

(74) Agent: **WILKINSON, Stephen, John**; Stevens Hewlett & Perkins, 1 St. Augustine's Place, Bristol BS1 4UD (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD FOR MODIFYING STARCH OR STARCH DERIVATIVES

(57) Abstract: A method of modifying starch or starch derivatives comprising: introducing a continuous flow of starch substrate, gas and, optionally, one or more reagents, into a reactor, wherein the starch substrate has a moisture content between 0 and 45% by weight, a residence time in the reactor of between 1 and 60 minutes and is heated to between 50 and 220°C, characterized in that the starch substrate and the gas are introduced into the reactor in opposing directions and in that the reactor has a tubular body comprising a rotating shaft upon which is disposed one or a plurality of blades.

WO 2005/047340 A1